

REMARKS

Claims 6-14 are pending in this application. By this Amendment, claims 6 and 9 are amended and claims 11-14 are added. Support for the amendments to the claims may be found, for example, in the specification at paragraphs [0050]-[0055]. No new matter is added.

In view of the foregoing amendments and the following remarks, reconsideration and allowance are respectfully requested.

I. Interview

The courtesies extended to Applicants' representative by Examiner Gugliotta at the interview held July 17, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

II. Rejections Under 35 U.S.C. §103(a)

A. Tomita, Haby and Farrauto

The Office Action rejects claims 6 and 8-10 under 35 U.S.C. §103(a) over U.S. Patent Application Publication No. 2003/0021949 to Tomita et al. (hereinafter "Tomita") as evidenced by Haby (The Weather Prediction) and The Weather Channel (www.weather.com/glossary/a.html), in view of WO 93/10886 to Farrauto et al. (hereinafter "Farrauto"). Applicants respectfully traverse the rejection.

The Office Action asserts that while Tomita and Farrauto are silent in regard to creating an oxidizing atmosphere using steam, the use of steam is inherent in Tomita because the heat treatments of Tomita are conducted in air, which will contain trace amounts of water vapor to about 4% (as evidenced by Haby and The Weather Channel Glossary). See Tomita, paragraphs [0048]-[0049]; see also, Office Action, page 3. By this Amendment, claims 6 and 9 are amended to more clearly distinguish over the applied references. Specifically, claims 6

and 9 are amended to recite "the heat treatment is conducted in an atmosphere containing oxygen and 5-30% steam by volume." The applied references fail to teach or suggest or establish any reason or rationale to provide such a combination of features, as recited in claims 6 and 9.

Therefore, for at least the above-mentioned reasons, the applied references fail to teach or to have rendered obvious, or establish any reason or rationale to provide, such a combination of features as recited in claims 6 and 9 and, thus, would not have rendered obvious claims 6 and 9.

Claims 6 and 9 would not have been rendered obvious by Tomita, Haby and Farrauto. Claims 8 and 10 depend from claims 6 and 9, respectively, and, thus, also would not have been rendered obvious by Tomita, Haby and Farrauto. Accordingly, withdrawal of the rejection is respectfully requested.

B. Tomita, Haby and Farrauto

The Office Action rejects claim 7 under 35 U.S.C. §103(a) over Tomita, as evidenced by Haby and The Weather Channel Glossary, in view of Farrauto, and further in view of U.S. Patent No. 4,957,779 to Irick, Jr. et al. (hereinafter "Irick"). Applicants respectfully traverse the rejection.

Claim 7 depends from claim 6 and, thus, requires all the limitations of claim 6. Accordingly, the deficiencies of Tomita, Haby and Farrauto with respect to claim 6 are equally applicable to claim 7. Irick fails to suggest or establish any reason or rationale to provide "the heat treatment is conducted in an atmosphere containing oxygen and 5-30% steam by volume," and thus does not cure the deficiencies of Tomita, Haby and Farrauto.

Therefore, Tomita, Haby, Farrauto, and Irick, considered either separately or combined, do not teach or suggest each and every element of claim 7 and, thus, also would not have rendered obvious claim 7.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

C. Tomita, Saha and Farrauto

The Office Action rejects 6 and 8-10 under 35 U.S.C. §103(a) over Tomita, in view of WO 03/082773 to Saha et. al. (hereinafter "Saha"). Applicants respectfully traverse the rejection.

The Office Action asserts that it would have been obvious to expose the honeycomb substrate of Tomita to an oxidizing atmosphere, such as steam, in order to improve the strength of the structure, as taught by Saha. See Office Action, page 6. Applicants respectfully disagree.

Saha is directed to production of a porous acicular mullite structure that has an improved thermal shock factor. See Saha, page 2, lines 15-24. Saha also discloses that after cooling and forming the mullite composition, the mullite composition may be further heat treated to improve the retained strength. This heat treatment may be carried out in air, water vapor, oxygen, an inert gas or mixture thereof for a time sufficient to form the mullite composition. See Saha, page 11, lines 7-11.

However, Saha is directed to a mullite structure, which is an oxide ceramic. The Office Action provides no reason or rationale as to why one of ordinary skill in the art would expect the process of Saha to improve the strength of a non-oxide ceramic, such as silicon carbide, as required by claims 6 and 9. Furthermore, Saha even teaches away from silicon carbide. See Saha, page 1, line 28-page 2, line 2. Thus, for at least these reasons, and as acknowledged during the interview, there would have been no reason or rationale to combine the applied references to achieve the method of claims 6 and 9. Clearly, the only motivation to combine the applied references improperly comes from applicants' disclosure and claims.

For at least the foregoing reasons, Applicants respectfully submit that claims 6 and 9 would not have been rendered obvious by Tomita, Saha and Farrauto, alone or in combination. Therefore, claims 6 and 9 and their dependent claims are patentable. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

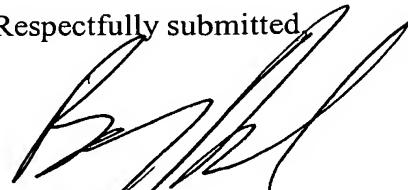
III. New Claims

By this Amendment, new claims 11-14 are presented. New claims 11-14 depend from claims 6 and 9, thus, distinguish over the applied references for at least the reasons discussed above with respect to claims 6 and 9. Additionally, new claims 11-14 recite features clarifying that the heating temperature (during oxidation) of the present method is less than the melting point of both SiC (2700°C) and Si (1414°C). By contrast, the substrate for oxidation in Irick is a parent metal body and the heating temperature during oxidation is above the melting point of the parent material. Therefore, for at least these reasons and those discussed above with respect to claims 6 and 9, new claims 11-14 distinguish over the applied references. Accordingly, prompt examination and allowance of new claims 11-14 are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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